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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appl. No. : 10/687,231 Confirmation No. 8054
Appellant : James T. Beals et al.
Filed : October 16, 2003
TC/A.U. : 1725
Examiner : Kuang Y. Lin

Docket No. : PA-085.10610-US(03-544)
Customer No. : 52237

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

REPLY BRIEF

This is in response to the Examiner's Answer mailed March
6, 2006.

Remarks/Arguments begin on page 2 of this paper.

REMARKS/ARGUMENTS

On page 5 of the Examiner's Answer, in paragraph (b), the Examiner argues that the preamble of Appellants' claims should not be construed as being a limitation. The Examiner relies upon *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 51 USPQ 2d 1161, 1165 (Fed. Cir. 1999) in support of his position. A review of this case shows that the Examiner has misquoted the case. On page 1165, the Court says:

"If, however, the body of the claim fully and intrinsically sets forth the complete invention, including all of its limitations, and the preamble offers no distinct definition of any of the claimed invention's limitations, but rather merely states, for example, the purpose or intended use of the invention, then the preamble is of no significance to the claim construction because it cannot be said to constitute or explain a claim limitation."

The Court in the *Pitney Bowes* case finds that the preamble of the claim at issue in that case should be construed as if in the balance of the claim because the preamble was "necessary to give life, meaning and vitality" to the claim.

As argued in Appellants' brief, the preamble in the claims on appeal should be given patentable weight since it gives life, meaning, and vitality to the claims and since this language serves to distinguish the prior art. It is noted that the Examiner does not argue that the preamble would not distinguish the prior art. Nor does the Examiner argue that the preamble

does not provide antecedent basis for later claimed elements such as "said wax die" and "the core". Not a single reference currently being relied upon by the Examiner relates to "[a] refractory metal core for maintaining a core in a desired position with respect to a wax die and avoiding core shift during casting." For this reason alone, all of the claims on appeal should be allowed.

With regard to the Examiner's arguments in paragraphs c and d on pages 6 and 7 of the Examiner's Answer, the fact is that Eldridge et al. '734 lacks the claimed spring tab means. The resilient sprint contact element 300 and the tip 308 are not used to provide spring loading when closed in a wax die for creating a spring-like effect for positioning the core element in the wax die and maintaining the position of the core during shelling. The Examiner's approach is to ignore the function of the "spring tab means" because this is the only way the rejection may have viability. This approach is wrong. Each word of the claim must be given patentable weight and significance. Clearly, the invention set forth in claim 11, as well as in the other claims on appeal, is far afield from what is taught in the cited Eldridge et al. '734 patent. The Examiner does not even make an effort to describe how any feature in Eldridge et al. '734 performs the claimed function. It should also be noted that

Eldridge et al. never say that the tip 308 possesses any springing function. Still further, the spring contact element is not a "core element" for use in a wax die. With respect to paragraph d, the argument made by the Examiner is incorrect. Appellants have properly claimed the structure in means plus function language. The phrase is not modified by sufficient structure or material for achieving the specified function. This is amply demonstrated by the specification in claim 12 that the spring tab means comprises a plurality of spaced apart spring tabs and by the structures set forth in dependent claims 22 and 23. With respect to claim 14, the Examiner focuses on the core element means, while ignoring the "means for engaging said core at a first end" and "means for engaging a slot in said wax die." The cited and applied reference does not have such structures because there is no core and no wax die in the reference.

With respect to the Examiner's argument in paragraph e on page 7 of the Examiner's Answer, there is no disclosure in the cited and applied reference that the portion which contacts adhesive 410 is a spring tab. What would be the point of having a spring tab, when the structure is joined to another structure (406) by an electrically conductive adhesive, by soldering, or by brazing?

With regard to paragraph f on page 7 of the Examiner's Answer, the Examiner offers no reason why the claim format can not be interpreted to invoke 35 U.S.C. 112, sixth paragraph. The limitations set forth in this claim are proper 35 U.S.C. 112, sixth paragraph limitations and can not be found anywhere in the cited and applied reference.

With respect to paragraph g on page 8 of the Examiner's Answer, while FIGS. 12F, 13A and 13B may show right angles, they do not show the claimed subject matter wherein the core element has means for engaging the core at a first end, which first end is connected to a planar central portion by a right angle portion. Claim 21 is allowable because the cited and applied reference does not teach or suggest a core element having means for abutting said wax die at a second end which is attached to the planar central portion and is at an angle with respect to the planar central portion. As for claims 22 and 23, the reference does not teach or suggest the claimed features. Once again, the Examiner can not point to a single place in the reference where these features can be found.

With respect to the Examiner's argument in paragraph h on page 8 of the Examiner's Answer, for the reasons discussed before, the argument with respect to the functional limitations

is not moot. Further, with respect to FIG. 3 in Grabbe, the central portion is clearly non-planar.

With respect to the argument set forth in paragraph I on pages 8 and 9 of the Examiner's Answer since there is no wax die in either of the cited and applied references; how could either of the references teach or suggest "the angle between the second end and the planar central portion is such that said second end abuts a wall of said slot in said wax die"? The answer is that they don't teach this claim limitation. With respect to claim 19, see the argument presented above. With respect to claims 20 and 24, the first end in Grabbe is not connected to the planar central portion by a right angle portion when one considers the Examiner's interpretation that the central portion is the left hand side of element 72. Intermediate the first end 84 and 72 are the arcuate shaped portion 76. With respect to the arguments concerning claims 22 and 23, the fact of the matter is that the references fail to teach or suggest the claimed features.

With respect to the arguments set forth in paragraph j on pages 9 and 10 of the Examiner's Answer, the fact remains that Eldridge '119 does not teach or suggest a refractory metal core for maintaining a core in a desired position with respect to a wax die and avoiding core shift during casting. As noted above, the argument with respect to the functional limitations is not

moot. Further, none of the elements 220, 230, and 240 is capable of performing the function as claimed because they are not used in the same environment. With respect to claims 15 and 19, the Examiner offers no reason why 35 U.S.C. 112, sixth paragraph does not apply. As for claims 16 and 17, the cited reference does not show any shell. Therefore, how can it possibly teach mechanical locking means for mechanically locking the refractory metal core to a shell at the send end of a core element? With respect to claims 20, 21, and 24, the Examiner's argument is essentially that the structures may or may not have the claimed angles depending upon the relative position between elements 256 and 250. Appellants submit that this is not a teaching of the claimed features. With regard to the routine experimentation, the Examiner offers no statement as to what would motivate one of ordinary skill in the art to arrive at the claimed angles. What if the routine experimentation found the angles to be something other than what is claimed?

CONCLUSION

All of the rejections of record fail because the Examiner has not given patentable weight to the preamble and because the Examiner has ignored both the environment and the functional limitations set forth in the claims. For the reasons set forth

herein and for the reasons set forth in Appellants' brief, the rejections of record should be reversed and the instant application should be remanded to the Primary Examiner for allowance and issuance.

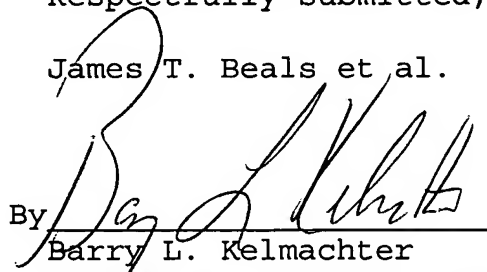
FEE

No fee is believed to be due as a result of this response. Should the Director determine that a fee is due, he is hereby authorized to charge said fee to Deposit Account No. 21-0279.

Respectfully submitted,

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IN TRIPLICATE

Date: May 3, 2006

I, Nicole Motzer, hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313" on May 3, 2006.

